

April 3, 2007

I would like to precede my response with an abstract to emphasize the importance of my invention.

ABSTRACT

This renewable energy "Wave And Tide Actuated Pump" will have as much effect on civilization as the invention of the wheel and create a new industrial revolution. 1/2 of one percent of the energy in the ocean waves is enough to provide the entire world's energy requirements. This pump will replace all greenhouse gas, carbon emission and nuclear power plants. It will be used to spread seawater on the desert floor, the resultant evaporation will form clouds and the deserts will be made to "bloom". The earth's climate will be moderated, global warming will be stopped and humanity, for the first time, will have the ability to regulate the earth's temperature and climate. New farmland will be created; new sources of fresh drinking water will be created thus increasing the world's ability to provide for humanity's needs, staving off the pending world wide food and water shortage that is now projected for the year 2025. The pumps will be used for seafood farming, reclaiming chemicals and precious metals from the oceans while cleaning man made pollutants out of the oceans. It will further reduce the world's dependence on oil, gas and coal as new vehicles, relying on now inexpensive electricity, replace greenhouse gas, carbon-emitting vehicles.

ADVANTAGES AND UNIQUENESS OF THIS PATENT APPLICATION

I will now point out the advantages and uniqueness of my patent application —

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1. The crux of the invention is the ballast weighted piston (8) as shown in claim 45, page 7 line 15 through page 8 line 3, where I have used in part the phraseology and semantics provided the "Examiner's Proposed Amendment". No other invention uses ballast in the piston (8) to provide the pressure necessary to pump the fluid. See patent application drawings figures 1-3.
2. The Hill ballast-weighted piston allows the pumping chamber to be defined by the bottom of the surface of the ballast-weighted piston (8), cylinder walls (7) and enclosed bottom of cylinder (13).
3. The Hill ballast-weighted piston (8) eliminates the need for an enclosed upper end as the pumping chamber.
4. The Hill ballast-weighted piston (8) eliminates the need for a rigid shaft surrounded by packing or sealing "O" rings on the upper end of the pumping chamber as the pumping chamber is below the piston's bottom surface, the connector (4) is connected to the top of the piston (8) and passes through the open top of the cylinder (7).

Whereas the Hill connector (4) is an improvement as it —

1. By having the ballast in the piston (8), the connector (4) is always in a state of tension in both the up and down stroke.